

CLAIMS

1. An image scanning/reading transmitter/receiver and a file transmission/reception method over the Internet or a file transmission/reception system, in which, with an image scanner/reader provided with an image scanning/reading function using an optical sensor (CCD: charge-coupled device), image data created by scanning/reading a printed document can be transmitted/received over the Internet to an Internet terminal device which is a transmission destination, by setting address newly set in an image file format through a transmission/reception process performed in an Internet terminal function provided to a main body of the image scanner/reader or connected to the image scanner/reader.

2. An image scanning/reading transmission/reception printer considered to be a next-generation facsimile machine in which, with an image scanner/reader having an image scanning/reading function and a printing function, image data created by scanning/reading a printed document can be transmitted/received over the Internet as an image file to an Internet terminal device as a transmission destination by an Internet terminal function provided to a main body of the image scanner/reader or connected to the image scanner/reader. When the image file is received by the recipient Internet terminal, the received image file is printed by the installed printing function.

3. The image scanning/reading transmitter/receiver according to claim 1 comprising an image reading transmission unit, wherein the image scanning/reading transmitter/receiver is an image scanner/reader connected to the Internet terminal device so as to enable data communication, and, by simple operation of an image scanning/reading operating portion, enables a transmission actuating operation from storage/saving of image data created by scanning/reading a printed document in image format to an external storage device provided to the Internet terminal device, until transmission of the image file created by image scanning/reading over the Internet by the Internet terminal function.

4. The image scanning/reading transmission/reception printer according to claim 2, which is a desktop image scanner/reader comprising a desktop casing and capable of reading a manuscript in the size of A4 or A3, which are commonly-used document sizes, wherein image scanning/reading transmission/reception printer is a desktop image scanning/reading transmission/reception printer comprising a communication function as an Internet terminal device and an image data printing function that performs a printing process upon reception of an image file, and is considered to be a next-generation facsimile device which is connected to a router which is an Internet terminal device installed in an office or a home by cable data communication or wireless data communication for Internet connection.

5. The image scanning/reading transmission/reception printer according to claim 2, which is a floor-installation image scanning/reading transmission/reception printer comprising a floor-installation casing and capable of reading a manuscript in the size of A4 or A3, which are commonly-used document sizes, and is considered to be a next-generation facsimile device comprising an image scanning function and an Internet terminal function or a printing function which performs a printing process upon reception of an image file.

6. The floor-installation image scanning/reading transmission/reception printer according to claim 5, comprising a fixed disk storage device and a memory card storage device which are external storage devices provided to the image scanner/reader, and a removable disk storage device using a CD-ROM, CD-RAM, DVD-ROM, DVD-RAM, or next-generation removable disk, as a storage medium.

7. A telephone-shaped Internet terminal device which is a computer having a shape of a portable telephone, comprising a telephone-shaped casing, and which is an Internet terminal device that uses a detachable Internet communication card as a communication function portion.

8. The image scanning/reading transmitter/receiver according to claim 1, which

is a portable image scanner/reader used connected to an Internet device having a small-sized portable casing and capable of reading a manuscript up to the size of a notepad.

9. The image scanning/reading transmitter/receiver according to claim 1, which is a portable image scanner/reader used connected to an Internet device having a portable casing that is so small as to be fitted in a business bag and capable of scanning/reading a manuscript up to the size of A4 which is a commonly used document size.

10. The image scanning/reading transmitter/receiver according to claim 1, which is a portable image scanner/reader suitable for scanning/reading books, bound documents, or printed documents of size larger than A4 size and of shape difficult to pass through a manuscript setting portion of the image scanner/reader for image scanning/reading, and which is a flatbed image scanner/reader comprising a casing which, as a mode of reading, allows a manuscript to be read to be placed on a desk with a reading face upward, and the image scanner/reader to be placed on an object to be read so that a bottom face of the image scanner/reader is scanned/read.

11. The file transmission/reception method or file transmission/reception system according to claim 1, which is a file transmission/reception method over the Internet, in which a file is transmitted/received over the Internet via a file server which is a newly installed file transmission/reception server, by setting a file address newly set as destination data in transmission or an IP telephone number to transmission destination data.

12. The facsimile file transmission/reception method or facsimile file transmission/reception system according to claim 1, which is a facsimile file transmission/reception method over the Internet, in which a facsimile file is transmitted/received over the Internet via a facsimile file server which is a newly installed facsimile file transmission/reception server, by setting a facsimile address

newly set as transmission destination data when an image file created by the scanning/reading with the image scanner/reader is transmitted/received, or an IP telephone number, to transmission destination data.

13. The file transmission/reception method and file transmission/reception system or facsimile file transmission/reception method and facsimile file transmission/reception system according to claim 1, wherein a file and a facsimile file can be transmitted/received by setting an IP telephone number of a recipient Internet terminal device as transmission destination data in file transmission/reception and facsimile file transmission/reception, and wherein a transmission mode can be set by adding, to destination data, a transmission mode sign, which is a setting sign for enabling setting and transmission in the transmission mode by being added to the IP telephone number which is transmission destination data.

14. The image scanning/reading transmitter/receiver according to claim 1, comprising a destination data storage function which includes destination data storage button switches provided to the image scanner/reader and which is a function of allocating one transmission address or IP telephone number which is destination data to one destination data storage button switch by operation of character/number input keys.

15. The image scanning/reading transmitter/receiver according to claim 1, wherein, through operation performed by an image scanner/reader operating portion of the image scanning/reading transmitter/receiver connected to the Internet terminal so as to enable data communication, image scanning/reading transmitting actuating operation from image scanning/reading operation till completion of image file transmission by the Internet terminal device performed over the Internet is enabled, and in terms of an image file transmitting operation method, in simple transmitting operation which includes setting a transmission manuscript to the image scanner/reader, input of destination data, and depression of a transmission button switch, the image file is transmitted over the Internet through an image file transmission process performed in

a communication function portion provided to the Internet terminal device in conjunction with creation of the image data by image scanning/reading. Image reading transmission actuating operation from the start of image scanning/reading till the completion of the image file transmission is enabled in transmission operation which is easy for everybody to perform at a reader operating portion provided to the image scanner/reader.

16. The Internet terminal device according to claim 1, wherein an image file created by scanning/reading with an image scanner/reader can be stored/saved in common image file format such as JPG file format, BMP file format, and TIF file format as the image file format for storage/saving to an external storage device provided to the Internet terminal device, and the Internet device comprises a function of storing image data in PDF file format which is a document storage file format by a U.S. company, Adobe Systems Incorporated or in an image file format which allows image data including several pages collected into one cohesive image file.

17. The Internet terminal device according to claim 1, comprising an image file converting function in which a file format, of an image file stored/saved on an external storage device provided to the Internet terminal device, such as JPG file format, BMP file format, TIF file format, and PDF file format, is mutually converted to each other's file format.

18. The Internet terminal device according to claim 1, wherein the Internet terminal device is provided with an Internet terminal device display portion having an image file data display function, and further comprises a scaling display function for scaling up and down an image displayed on the Internet terminal device display portion, and a scrolling display function for scrolling the displayed image in vertical and lateral directions.

19. A personal authentication method using the image scanning/reading transmitter/receiver according to claim 1, wherein a signature image file created from

a signed notepad is transmitted to a system on the Internet using an image scanning/reading transmitter/receiver over the Internet. A personal authentication process is performed in the system receiving the signature image file through a writing identification process by comparing the signature image file with signature writing data which has been registered in advance when a person who accesses the system has signed a contract.

20. A personal authentication method by signature image data, which is enabled on the Internet with the image scanning/reading transmitter/receiver according to claim 1, wherein, with an image scanner/reader connected to an Internet terminal device, a manuscript of a signed notepad is scanned/read to be transmitted from the Internet terminal device to the system via the Internet as a signature image file which is a collection of signature image data and signature image file size information or signature image reading time information, and a unique personal authentication method and security method characterized as "only the person, at the time, for once" is enabled through determination by the system receiving the signature image file, of writing data of the signature image file.

21. A personal authentication method in which personal authentication is performed by comparing an iris of an eye captured by a camera with an optical sensor and an iris pattern of an identical person stored/saved in advance. A personal authentication method by iris moving image data captured by a camera provided with an optical sensor, wherein the personal authentication method is an iris moving image data identification method in which the iris image data at the time is not static image data but image iris moving image data with duration of several seconds and includes information on iris movement during photography or photo image information due to change of distance between a lens of the optical camera and the eye, together with photo time data.

22. A ballot image scanner/reader which is an image scanner/reader installed at a voting station at an election, in which a ballot image file is created by

scanning/reading a ballot on which a name of a candidate is written, and ballot collection and counting is enabled applying a name recognition software to ballot image data.

23. A voting method in which a ballot image scanner/reader is installed at a voting station at an election and voters write down a name of a candidate on a ballot to post the ballot to a ballot setting opening of the ballot image scanner/reader, and a ballot collection and counting method and a ballot collection and counting system, in which a ballot collection and counting unit is enabled which is a function of counting votes by a name identification unit applying a name recognition software to candidates written on ballots.

24. A voting method and a ballot collection and counting method, in which a ballot image scanner/reader comprising an Internet terminal function is installed at a voting station and connected to a voting collection and counting system via the Internet preliminarily to an election. Scanning/reading of images of ballots posted to a ballot posting opening of a ballot image scanner/reader on which a name of a candidate is written on a voting date is performed, and voting image files are created to be transmitted as needed to the ballot connection and counting system on the Internet one by one in real time. A voting method and ballot collection and counting method and a ballot collection and counting system using a ballot image scanner/reader, in which on the ballot collection and counting system that collects the ballot image files via the Internet comprises a ballot counting unit that counts and sums up votes to candidates from ballot image files using a writing recognition software.

25. The image scanner/reader according to claim 1, wherein a manuscript setting portion of a desktop image scanning/reading transmission/reception printer and a floor-installation image scanner/reader comprises a continuous reading function that allows reading of a manuscript having a several dozens of pages. And, the image scanning/reading transmitter/receiver according to claim 1, which is adapted to continuous reading of plural number of pages, for storing/saving image data including

a several number of pages created by image scanning/reading as one collective file in PDF format to an external storage device of a connected computer, and, when a read document manuscript is a text document, enabling a text document filing function, to a read document image file including a several number of pages, provided to the computer connected to the desktop image scanning/reading transmission/reception printer and floor-installation image scanner/reader by an OCR (Optical Character Reader) software.

26. The Internet terminal device according to claim 1, comprising an Internet terminal device ID notification function which, in order that a file server or facsimile server can recognize the terminal ID which indicates a type and a setting condition or a state of the Internet terminal device having a fixed IP address, automatically transmits the terminal device ID to the server.

27. The image scanning/reading transmitter/receiver according to claim 1 and the Internet terminal device connected to the image scanning/reading transmitter/receiver so as to enable data communication, wherein image data created by image scanning/reading by the image scanner/reader is stored/saved in an image file format previously selected from some image file formats provided for selection in storage/saving to an external storage device of the Internet terminal device, and wherein reading transmitting actuating operation corresponding to operation from image scanning/reading to completion of the read image file transmission by the Internet terminal device is enabled at an image scanning/reading operating portion or an Internet terminal device operating portion.

28. A file transmission/reception software that is installed on an Internet terminal device and comprising a file transmission/reception function and a facsimile file transmission/reception function or a file management function wherein the software is specialized in the file transmission/reception function and the transmission/reception file management function.